

CLAIMS

The invention claimed is:

- 5 1. A device comprising:
a jitter buffer; and
a processor coupled with the jitter buffer, wherein the processor is adapted to
receive a stream of audio packets in the jitter buffer;
play out the audio packets from the jitter buffer;
10 receive barge-in sound while playing out the audio packets;
encode and transmitting the barge in sound; and
flush without playing out at least some of the yet unplayed audio
packets from the jitter buffer in response to transmitting the barge-in sound.
- 15 2. The device of claim 1, wherein the processor is further adapted to:
confirm that a kill-on-barge-in prompt is playing prior to flushing.
3. The device of claim 1, wherein
the barge-in sound is encoded in a barge-in packet that is transmitted through a
20 network.
4. The device of claim 1, wherein the processor is further adapted to:
receive a first purge packet through the network in response to the
barge-in packet,
25 wherein flushing the jitter buffer is performed in response to the first purge
packet.
5. The device of claim 4, wherein
the purge packet encodes an instruction to flush the jitter buffer.
- 30 6. The device of claim 4, wherein
the purge packet is a RTP packet.
7. The device of claim 4, wherein

the purge packet is a NSE packet.

8. The device of claim 4, wherein the processor is further adapted to:

receive a second purge packet through the network; and

ignore the second purge packet.

9. The device of claim 8, wherein the processor is further adapted to:

compare a synchronization identification aspect of the second purge

packet to a corresponding aspect of the first purge packet,

wherein ignoring the second purge packet takes place only if there is a match.

10. The device of claim 1, wherein the processor is further adapted to:

receive an additional audio packet after flushing the yet unplayed audio
packets from the jitter buffer; and

flush the additional packet without playing it out.

11. The device of claim 10, wherein the processor is further adapted to:

start counting a backoff period of a first duration after flushing the yet
unplayed audio packets; and

flush without playing out all packets received in the jitter buffer for the
first duration.

12. The device of claim 11, wherein the processor is further adapted to:

receive a first purge packet through the network; and

decode from the purge packet the first duration.

13. A device comprising:

a network interface for coupling to a network; and

a processor coupled with the network interface, wherein the processor is

adapted to

detect a barge-in event;

responsive to the barge-in event, generate a purge packet; and

transmit the purge packet through a network to a voice interface device

having a jitter buffer,

wherein the purge packet is for flushing the jitter buffer upon being received.

14. The device of claim 13, wherein the processor is further adapted to:
confirm that a kill-on-barge-in prompt is playing prior to generating
5 the purge packet.

15. The device of claim 13, wherein
the purge packet is an NSE packet.

- 10 16. The device of claim 13, wherein the processor is further adapted to:
transmit audio packets to the voice interface device through a media
path, and
wherein the purge packet is an RTP packet, and sent through the media path.

- 15 17. The device of claim 13, wherein
the purge packet is transmitted with a higher priority than the audio packets.

18. The device of claim 13, wherein the processor is further adapted to:
receive a barge-in packet; and
20 decode the barge-in packet to detect the barge-in event.

19. The device of claim 18, wherein
a barge-in sound is decoded from the barge-in packet, and
the barge-in sound is one of a voice and a DTMF sound.

20. The device of claim 13, wherein the processor is further adapted to:
encode a first duration in the purge packet.

21. The device of claim 20, wherein the processor is further adapted to:
30 determine the first duration.

22. A device comprising:
means for receiving a stream of audio packets in a jitter buffer;
means for playing out the audio packets from the jitter buffer;

means for receiving barge-in sound while playing out the audio packets;
means for encoding and transmitting the barge in sound; and
means for flushing without playing out at least some of the yet unplayed audio
packets from the jitter buffer in response to transmitting the barge-in sound.

5

23. The device of claim 22, further comprising:
means for confirming that a kill-on-barge-in prompt is playing prior to
flushing.

10 24. The device of claim 22, wherein
the barge-in sound is encoded in a barge-in packet that is transmitted through a
network.

15 25. The device of claim 22, further comprising:
means for receiving a first purge packet through the network in response to the
barge-in packet,
wherein flushing the jitter buffer is performed in response to the first purge
packet.

20 26. The device of claim 25, wherein
the purge packet encodes an instruction to flush the jitter buffer.

27. The device of claim 25, wherein
the purge packet is a RTP packet.

25

28. The device of claim 25, wherein
the purge packet is a NSE packet.

30 29. The device of claim 25, further comprising:
means for receiving a second purge packet through the network; and
means for ignoring the second purge packet.

30. The device of claim 29, further comprising:

means for comparing a synchronization identification aspect of the second
purge packet to a corresponding aspect of the first purge packet,
wherein ignoring the second purge packet takes place only if there is a match.

5 31. The device of claim 22, wherein further comprising:
means for receiving an additional audio packet after flushing the yet unplayed
audio packets from the jitter buffer; and
means for flushing the additional packet without playing it out.

10 32. The device of claim 31, further comprising:
means for starting to count a backoff period of a first duration after flushing
the yet unplayed audio packets; and
means for flushing without playing out all packets received in the jitter buffer
for the first duration.

15 33. The device of claim 32, further comprising:
means for receiving a first purge packet through the network; and
means for decoding from the purge packet the first duration.

20 34. A device comprising:
means for detecting a barge-in event;
means for responsive to the barge-in event, generating a purge packet; and
means for transmitting the purge packet through a network to a voice interface
device having a jitter buffer,
25 wherein the purge packet is for flushing the jitter buffer upon being received.

35. The device of claim 34, further comprising:
means for confirming that a kill-on-barge-in prompt is playing prior to
generating the purge packet.

30 36. The device of claim 34, wherein
the purge packet is an NSE packet.

37. The device of claim 34, further comprising:

means for transmitting audio packets to the voice interface device through a media path, and

wherein the purge packet is an RTP packet, and sent through the media path.

5 38. The device of claim 34, wherein
the purge packet is transmitted with a higher priority than the audio packets.

39. The device of claim 34, further comprising:
means for receiving a barge-in packet; and
10 means for decoding the barge-in packet to detect the barge-in event.

40. The device of claim 39, wherein
a barge-in sound is decoded from the barge-in packet, and
the barge-in sound is one of a voice and a DTMF sound.

15 41. The device of claim 34, further comprising:
means for encoding a first duration in the purge packet.

42. The device of claim 41, further comprising:
20 means for determining the first duration.

43. An article comprising: a storage medium, the storage medium having
instructions stored thereon, wherein when the instructions are executed by at least one
device, they result in:

25 receiving a stream of audio packets in a jitter buffer;
playing out the audio packets from the jitter buffer;
receiving barge-in sound while playing out the audio packets;
encoding and transmitting the barge in sound; and
flushing without playing out at least some of the yet unplayed audio packets
30 from the jitter buffer in response to transmitting the barge-in sound.

44. The article of claim 43, wherein the instructions further result in:
confirming that a kill-on-barge-in prompt is playing prior to flushing.

45. The article of claim 43, wherein
the barge-in sound is encoded in a barge-in packet that is transmitted through a
network.

46. The article of claim 43, wherein the instructions further result in:
receiving a first purge packet through the network in response to the barge-in
packet,
wherein flushing the jitter buffer is performed in response to the first purge
packet.

47. The article of claim 46, wherein
the purge packet encodes an instruction to flush the jitter buffer.

48. The article of claim 46, wherein
the purge packet is a RTP packet.

49. The article of claim 46, wherein
the purge packet is a NSE packet.

50. The article of claim 46, wherein the instructions further result in:
receiving a second purge packet through the network; and
ignoring the second purge packet.

51. The article of claim 50, wherein the instructions further result in:
comparing a synchronization identification aspect of the second purge packet
to a corresponding aspect of the first purge packet,
wherein ignoring the second purge packet takes place only if there is a match.

52. The article of claim 43, wherein the instructions further result in:
after flushing the yet unplayed audio packets from the jitter buffer, receiving
an additional audio packet; and
flushing the additional packet without playing it out.

53. The article of claim 52, wherein the instructions further result in:

after flushing the yet unplayed audio packets, starting to count a backoff period of a first duration; and

flushing without playing out all packets received in the jitter buffer for the first duration.

5

54. The article of claim 53, wherein the instructions further result in:
receiving a first purge packet through the network; and
decoding from the purge packet the first duration.

- 10 55. An article comprising: a storage medium, the storage medium having instructions stored thereon, wherein when the instructions are executed by at least one device, they result in:

detecting a barge-in event;

responsive to the barge-in event, generating a purge packet; and

- 15 transmitting the purge packet through a network to a voice interface device having a jitter buffer,

wherein the purge packet is for flushing the jitter buffer upon being received.

- 20 56. The article of claim 55, wherein the instructions further result in:
confirming that a kill-on-barge-in prompt is playing prior to generating the purge packet.

57. The article of claim 55, wherein
the purge packet is an NSE packet.

25

58. The article of claim 55, wherein the instructions further result in:
transmitting audio packets to the voice interface device through a media path,
and

wherein the purge packet is an RTP packet, and sent through the media path.

30

59. The article of claim 55, wherein
the purge packet is transmitted with a higher priority than the audio packets.

60. The article of claim 55, wherein the instructions further result in:

receiving a barge-in packet; and
decoding the barge-in packet to detect the barge-in event.

61. The article of claim 60, wherein
5 a barge-in sound is decoded from the barge-in packet, and
the barge-in sound is one of a voice and a DTMF sound.

62. The article of claim 55, wherein the instructions further result in:
encoding a first duration in the purge packet.

63. The article of claim 62, wherein the instructions further result in:
10 determining the first duration.

64. A method comprising:
15 receiving a stream of audio packets in a jitter buffer;
playing out the audio packets from the jitter buffer;
receiving barge-in sound while playing out the audio packets;
encoding and transmitting the barge in sound; and
flushing without playing out at least some of the yet unplayed audio packets
20 from the jitter buffer in response to transmitting the barge-in sound.

65. The method of claim 64, further comprising:
confirming that a kill-on-barge-in prompt is playing prior to flushing.

66. The method of claim 64, wherein
25 the barge-in sound is encoded in a barge-in packet that is transmitted through a
network.

67. The method of claim 64, further comprising:
30 receiving a first purge packet through the network in response to the barge-in
packet,
wherein flushing the jitter buffer is performed in response to the first purge
packet.

68. The method of claim 67, wherein
the purge packet encodes an instruction to flush the jitter buffer.

69. The method of claim 67, wherein
the purge packet is a RTP packet.

70. The method of claim 67, wherein
the purge packet is a NSE packet.

71. The method of claim 67, further comprising:
receiving a second purge packet through the network; and
ignoring the second purge packet.

72. The method of claim 71, further comprising:
comparing a synchronization identification aspect of the second purge packet
to a corresponding aspect of the first purge packet,
wherein ignoring the second purge packet takes place only if there is a match.

73. The method of claim 64, further comprising:
after flushing the yet unplayed audio packets from the jitter buffer, receiving
an additional audio packet; and
flushing the additional packet without playing it out.

74. The method of claim 73, further comprising:
after flushing the yet unplayed audio packets, starting to count a backoff
period of a first duration; and
flushing without playing out all packets received in the jitter buffer for the first
duration.

75. The method of claim 74, further comprising:
receiving a first purge packet through the network; and
decoding from the purge packet the first duration.

76. A method comprising:

detecting a barge-in event;
responsive to the barge-in event, generating a purge packet; and
transmitting the purge packet through a network to a voice interface device
having a jitter buffer,
5 wherein the purge packet is for flushing the jitter buffer upon being received.

77. The method of claim 76, further comprising:
confirming that a kill-on-barge-in prompt is playing prior to generating the
purge packet.

10 78. The method of claim 76, wherein
the purge packet is an NSE packet.

79. The method of claim 76, further comprising:
15 transmitting audio packets to the voice interface device through a media path,
and
wherein the purge packet is an RTP packet, and sent through the media path.

80. The method of claim 76, wherein
20 the purge packet is transmitted with a higher priority than the audio packets.

81. The method of claim 76, further comprising:
receiving a barge-in packet; and
decoding the barge-in packet to detect the barge-in event.

25 82. The method of claim 81, wherein
a barge-in sound is decoded from the barge-in packet, and
the barge-in sound is one of a voice and a DTMF sound.

30 83. The method of claim 76, further comprising:
encoding a first duration in the purge packet.

84. The method of claim 83, further comprising:
determining the first duration.